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Cicero

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(54) **METHODS AND APPARATUS FOR WIDE BANDWIDTH ANTENNA WITH ENHANCED CONNECTION**

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(71) Applicant: **Raytheon Company**, Waltham, MA (US)

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(72) Inventor: **Patrick Cicero**, Tucson, AZ (US)

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(73) Assignee: **RAYTHEON COMPANY**, Waltham, MA (US)

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Primary Examiner — Hoang V Nguyen

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(74) *Attorney, Agent, or Firm* — Daly, Crowley, Mofford & Durkee, LLP

(57) **ABSTRACT**

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Methods and apparatus for a directive, instantaneous wide bandwidth antenna including a ground plane having a recess with a tapered region accessible by an electromagnetic field via a radiating aperture at a forward end of the recess. The dielectric feed can have a tapered portion proximate the tapered region to guide the electromagnetic field into the recess through the radiating aperture and influence pattern directivity. The antenna can further include a conductive plating disposed at least partially about the dielectric feed in a wedge configuration to influence pattern beam width. The dielectric feed can include a conductive portion on a bottom of the wedge coupled to the conductive plating and to a grooved trace.

(52) **U.S. Cl.**

CPC **H01Q 1/38** (2013.01); **H01Q 1/28** (2013.01); **H01Q 9/0485** (2013.01); **H01Q 13/02** (2013.01); **H01Q 13/10** (2013.01)

(58) **Field of Classification Search**

CPC H01Q 13/10; H01Q 13/02; H01Q 1/28
See application file for complete search history.

20 Claims, 11 Drawing Sheets

